

In the claims:

Applicant hereby restates the claims of the present application as follows:

1. (Cancelled)        A hydraulic transmission system for use with at least one water current driven turbine rotor, characterised in that a low speed high pressure pump or pumps (24, 24A) is/are arranged to receive operational drive from the turbine rotor (6,20), and to deliver high pressure output to a high speed hydraulic motor or turbine (35) in such manner as to produce an increase of the shaft or motor speed accompanied by a corresponding reduction of torque required to drive electrical generators or other machinery(38) as compared with the shaft speed of the turbine rotor or rotors.
2. (Cancelled)        A hydraulic transmission system as in claim 1, and characterised in that a substantially closed hydraulic fluid circuit (27,31, 33,34) is provided for said hydraulic fluid associated with the low speed high pressure pump or pumps (24, 24A).
3. (Cancelled)        A hydraulic transmission system as claimed in claim 1 or 2, and characterised in that the hydraulic fluid for said high pressure pump or pumps is/are arranged to be recirculated from a high speed hydraulic motor or turbine (35) through a low pressure fluid return line or lines (34) to feed said low-speed high-pressure hydraulic pump or pumps (24, 24A).
4. (Cancelled)        A hydraulic transmission system as in claim 1 2 or 3, and characterised in that the hydraulic fluid is water.
5. (Cancelled)        A hydraulic transmission system as claimed in claim 4, characterised in that the water required is originally be drawn from the water within which said turbine rotor or rotors (6)is/are is operationally located.

6. (Cancelled) A hydraulic transmission system as claimed in claim 5, and characterised in that any loss of the water is arranged to be made up by drawing replacement water from the water within which said rotor or rotors (6,20)) is/are operationally located.

7. (Cancelled) A hydraulic transmission system as claimed in claim 6, and characterised in that such make up water is filtered to remove suspended solids or other undesirable pollutants before being stored in a header tank(41) situated in such a position that it can feed make-up water into the system to replace and water lost through leakage.

8. (Cancelled) A hydraulic transmission system as in claim 4,5, 6 or 7, and characterised in that since the hydraulic fluid is water is drawn from the operating environment of the turbine or turbines, a relatively high degree of fluid leakage can be tolerated, thereby to allow the use of larger than would otherwise be acceptable clearances relative movement for seals, the arrangement being such that the operation of the pumps can be optimised for mechanical efficiency rather than 100% retention of hydraulic fluid.

9. (Cancelled) A hydraulic transmission system as claimed in any one of the preceding claims, and characterised in that each said rotor (6,20) is associated with a plurality of separate pumps (24,24A) arranged to be operationally driven from the associated rotor (20), and in that the hydraulic fluid inputs (29) to the pumps are connected to receive fluid from a low pressure fluid plenum (28) and the output sides of all said pumps are associated with a common high pressure plenum (31) connecting via high pressure fluid circuit (33) with the hydraulic motor or rotor (35) coupled to drive a generator or other machinery (38).

10. (Cancelled) A hydraulic transmission system as claimed in claim 9, and characterised in that a surge or pressure balancing arrangement (32) is provided in the high pressure fluid circuit.

11. (Cancelled) A marine turbine installation incorporating a hydraulic transmission system as claimed in any one of the preceding claims.

12. (Cancelled) A water drivable turbine installation including a hydraulic power transmission system for increasing the effective rotational speed of the turbine.

13. (New) A hydraulic transmission system for use with at least one water current driven turbine rotor, the transmission system comprising: a first pump adapted to be coupled to an output of a water current driven turbine rotor, a second pump adapted to be coupled to a drive shaft, a fluid coupling between an output of the first pump and an input of the second pump for conveying water pressurized by the first pump to the second pump, an intake for receiving water from any surrounding body of water in which the transmission system is submerged, a filter coupled to the intake for filtering any water received through the intake, a header tank coupled to the filter for storing water that has passed through the filter, and a fluid coupling between an outlet of the header tank and an inlet to the first pump for supplying water to the first pump.

14. (New) A hydraulic transmission system as claimed in claim 13 further comprising a coupling between an outlet of the second pump and the inlet to the first pump for re-circulating water previously pumped from the first pump to the second pump.

15. (New) A hydraulic transmission system as claimed in claim 14 further comprising a plurality of additional first pumps, a pressure plenum coupling the first pumps to the input of the second pump, and a return plenum coupled to the outlet of the second pump for distributing re-circulating water to the first pumps.

16. (New) A hydraulic transmission system as claimed in claim 15 further comprising a pressure balancing tank coupled to the pressure plenum.

17 (New) A hydraulic transmission system as claimed in claim 13, 14, 15, or 16 wherein the first and second pumps are sized such that an any given non-zero

pressure in the fluid coupling between an output of the first pump and an input of the second pump, the speed of the second pump will be greater than the first pump.

18. (New) A marine turbine installation comprising a support column fixed to a substrate lying below a body of water in which currents exist, a turbine coupled to the support column having a rotor positionable in the body of water for interaction with the water currents, the rotor having an output shaft, a first pump coupled to the output shaft, a second pump coupled to a drive shaft of an electrical generator, a fluid coupling between an output of the first pump and an input of the second pump for conveying water pressurized by the first pump to the second pump, an intake for receiving water from the body of water, a filter coupled to the intake for filtering any water received through the intake, a header tank coupled to the filter for storing water that has passed through the filter, and a fluid coupling between an outlet of the header tank and an inlet to the first pump for supplying water to the first pump.

19. (New) A marine turbine installation as claimed in claim 18 further comprising a coupling between an outlet of the second pump and the inlet to the first pump for re-circulating water previously pumped from the first pump to the second pump.

20. (New) A marine turbine installation as claimed in claim 19 further comprising a plurality of additional first pumps, a pressure plenum coupling the first pumps to the input of the second pump, and a return plenum coupled to the outlet of the second pump for distributing re-circulating water to the first pumps.

21. (New) A marine turbine installation as claimed in claim 20 wherein at least one of the additional first pumps is coupled to a second turbine and a pressure balancing tank is coupled to the pressure plenum so that differences in rotor speed between the turbines can be accommodated.

22. (New) A marine turbine installation as claimed in claim 21 wherein each of the turbines are coupled to a plurality of first pumps.